

Commonwealth of Kentucky
Division for Air Quality
PERMIT STATEMENT OF BASIS

Federally-Enforceable Conditional Major
FEDERAL BUREAU OF PRISONS USP BIG SANDY
1197 AIRPORT ROAD
INEZ, KY.
September 12, 2002
HERBERT CAMPBELL, REVIEWER
Plant I.D. # 021-159-00025
Application Log # 54899
Permit # **F-02-013 (Revision-1)**

Minor Permit Revision for Emergency Generators (PG1-08, PG2-08 & PG3-08), Paint Spray Booth (PSB) and Emergency Diesel Fire Pump (DFP):

DESCRIPTION:

Federal Bureau of Prisons, USP Big Sandy proposes to increase the hours of operation for their Emergency Generators and Emergency Diesel Fire Pump from 38 hours each to 124 hours each at their facility near Inez, Kentucky. This will allow them sufficient time for the generator engines to operate under full-load and then "cycle-down" before complete "shut-down". NOTE: With limiting the operation of each of the three oil-fired emergency generators and the emergency diesel fire pump to 124 hours each in any consecutive 12 month period, the total hours of operation (496 hours) will not exceed the 500 hrs/yr limitation for Emergency Generators per EPA Memorandum. Also, the FBOP proposes to remove the Spray Paint Booth, dismantle it and they request that the DAQ delete it from the permit.

COMMENTS:

Based on the information provided, increasing the operation to 124 hours each for the four oil-fired emergency engines will increase the largest criteria pollutant from these units, NOx, to 4.4 tons/yr and will not significantly impact source wide emissions. Also, the source has stated that they will remove the Spray Paint Booth, dismantle it and they request that the DAQ delete it from the permit. This will reduce source wide emissions of VOC and HAPS. The source has been issued a Conditional Major permit for this facility. The Division will incorporate the requested minor revisions into the permit.

Source Description:

A construction/operating permit application was received from Federal Bureau of Prisons on October 26, 2001. The applicant proposes to construct/operate three natural-gas fired indirect heat exchangers with backup #2 fuel oil rated at 17.9 mmBTU each, one natural-gas fired indirect heat exchanger rated 1.5 mmBTU, three natural-gas fired indirect heat exchangers with backup #2 fuel oil rated at 1.176 mmBTU each, three emergency diesel generators rated (1 at 2550 BHP & 2 at 2935 BHP), one spray paint booth, and one emergency diesel fire water pump rated 275 BHP for the USP Big Sandy correctional facility. The source is taking self-imposed limits to preclude the applicability of Title V.

Facility Location and Attainment Status :

This facility is located in Martin County, Kentucky. Martin County was classified as attainment for TSP, sulfur dioxide, carbon monoxide, nitrogen oxides, and ozone. The addition of the new boilers using #2 fuel oil increases the source-wide emissions of sulfur dioxide over 100 tons per year and the paint spray booth increases the source-wide emissions of ethylene glycol (HAP) over 10 tons per year. The source is taking self-imposed limits to preclude the applicability of Title V and become a conditional major source.

Comments:

Emissions were calculated based on AP - 42 tables and vendor information. The results of the analysis are summarized in the air quality analysis. Since this review has disclosed that all requirements will be met, a preliminary determination proposes that a draft permit may be issued as conditioned, but contingent to the satisfactory resolution of any adverse public comments which might be received.

Based on the information provided, the Division concluded that Regulation 401 KAR 59:015 and 60:005 incorporating by reference 40 CFR 60 Subpart Dc apply to the new boilers. Regulation 401 KAR 59:010 applies to the spray booth.

Compliance with annual emissions and processing limitations imposed pursuant to Section 1c of the material incorporated by reference in 401 KAR 52:030, Section 5(8)b, and contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.

In accordance with Regulation 401 KAR 52:030, Section 10, incorporating the standard requirements reference material Section 1b, source wide emissions for Sulfur Dioxide (SO₂) shall not equal or exceed 90 tons per year and Ethylene Glycol (HAP) shall not equal or exceed 9 tons per year on a consecutive twelve (12) month total.

Generator operations shall not equal or exceed the agreed limitation of 500 hr/yr.

The permittee shall adhere to the potential emissions limitations specified in the permit.

EMISSION AND OPERATING CAPS DESCRIPTION:

Source-wide usage of #2 fuel oil for all boilers and diesel generators shall not equal or exceed 231,845 gallons per year. Allowable hours of operation for each boiler using #2 fuel oil shall not exceed 32 hours and 38 hour for each generator per each consecutive twelve (12) month rolling total.

Other operating limitations for the paint spray booth are in the permit.

OPERATIONAL FLEXIBILITY: None

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or record-keeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.